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| 10/822,147 | 04/12/2004 | Kazuo Kuroda | 4105-30 | 1165 |
| 23117 7590 04/15/2009 NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203 | | | | |
| EXAMINER | | | | |
| ALUNKAL, THOMAS D | | | | |
| ART UNIT | | PAPER NUMBER | | |
| 2627 | | | | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/822,147

Applicant(s)

KURODA, KAZUO

Examiner

THOMAS D. ALUNKAL

Art Unit

2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 December 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-6,8,10,11 and 13-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4-6,8,10,11 and 13-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 12/29/08 with respect to claims 1, 4-6, 8, 10, 11, and 13-16 rejected under 35 U.S.C. 112, first paragraph are persuasive and the previous rejections are withdrawn.

Applicant's arguments with respect to the 35 U.S.C. 102(b) rejections indicated in the previous Office Action have been fully considered and are considered persuasive. However, applicant's arguments with respect to the 35 U.S.C. 103(a) rejections of pending claims 1, 4-6, 8, 10-11, and 13-16 have been fully considered but are not considered persuasive.

The crux of the applicant's argument is that Campbell et al. does not disclose the specific orientation of a grating structure with respect with the recording medium. The applicant argues that "nowhere in this description is there any disclosure or suggestion of how grating of a spatial modulator should be oriented relative to a moving direction of a recording medium." However, Column 5, lines 33-34 disclose that the SLM "...is encoded in a 2D array pattern of transparent and opaque pixels" which regulates incident light. Thus, Campbell et al. does disclose a type of grating for regulating incident light. Additionally, Column 7, starting at line 52 further discloses that the SLM is able to be moved and rotated in various manners. Thus, when the SLM, which is rotated about an optical axis, of Campbell et al. is provided to the base system of Ishii et al., the claim limitations of the independent claims are met as indicated in the Office Action dated 9/25/08. In addition, the applicant has presented similar arguments with

respect to the 35 U.S.C. 103(a) rejections of claims 1, 4-6, 8, 10-11, and 13-16 over Satoh et al. ('489) or Satoh et al ('480) and further in view of Campbell et al. These arguments are rebutted for reasons similar to those provided above.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 4, 6, 8, 10, 11, and 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishii et al. (US 4,012,108) and in view of Campbell et al. (US 5,844,701), as applied in the Office Action dated 9/25/08. NOTE: The disclosure of the "fixedly positions" limitation of independent claims 1, 8, 11, and 15 is provided in Figure 1 of Ishii et al.

Claims 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ishii et al. (US 4,012,108), in view of Campbell et al. (US 5,844,701), and further in view of Satoh et al. (US 4,104,489), as applied in the Office Action dated 9/25/08.

Claims 1, 4-6, 8, 10, 11, and 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Satoh et al. (US 4,104,489) or Satoh et al. (US 4,224,480) and in view of Campbell et al. (US 5,844,701), as applied in the Office Action dated 9/25/08.

NOTE: The disclosure of the "fixedly positions" limitation of independent claims 1, 8, 11, and 15 is provided in Figure 1B of Satoh et al. ('489).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Lee et al. (US 4,310,894) discloses high speed ambiguity function evaluation by optical processing.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to THOMAS D. ALUNKAL whose telephone number is (571)270-1127. The examiner can normally be reached on M-F 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on (571)272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Thomas D Alunkal/
Examiner, Art Unit 2627

/Wayne Young/
Supervisory Patent Examiner, Art Unit 2627

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